

CLAIMS

1. An isolated protein having a receptor serine/threonine kinase domain corresponding to that in daf-1 gene product, activin type II receptor and TGF- β type II receptor, a
5 DFKSRN or DLKSKN sequence in subdomain VIB of said domain and/or a GTKRYM sequence in subdomain VIII of said domain.
2. A protein according to claim 1, which additionally comprises an ATP-binding sequence that is Gly-Xaa-Gly-Xaa-Xaa-Gly in subdomain I of said domain, and a Lys residue in
10 subdomain II of said domain.
3. An isolated protein having a GS box and a receptor serine/threonine kinase domain which has more than 50% identity to the kinase domain of any of the amino-acid sequences identified herein as SEQ ID. Nos. 2, 4, 6, 8, 10,
15 12, 14, 16 and 18.
4. A protein according to claim 3, wherein the identity is more than 60%.
5. A protein according to ^{claim 1} ~~any preceding claim~~, having
/ serine/threonine kinase activity.
- 20 6. An isolated protein having all or part of any of the amino-acid sequences identified herein as SEQ. ID Nos. 2, 4, 6, 8, 10, 12, 14, 16 and 18, and activin receptor type I functionality.
7. An isolated protein having a GS box and an amino-acid
25 sequence corresponding to part or all of the amino-acid sequence of an activin type I receptor, and wherein the protein has serine/threonine kinase activity and/or activin type II receptor interaction providing activin-binding activity.
- 30 8. An isolated protein having a GS box and all or part of any of the amino-acid sequences identified herein as SEQ. ID Nos. 2, 4, 6, 8, 10, 12, 14, 16 and 18, and TGF- β -type I receptor functionality.
9. An isolated protein having an amino-acid sequence corresponding to part or all of the amino-acid sequence of
/ a TGF- β -type I receptor, and wherein the protein has serine/threonine kinase activity and/or TGF- β -type II receptor interaction providing TGF- β -binding activity.

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- claim 1*
10. A protein according to ~~any of claims 1 to 5~~, having all or part of the amino-acid sequence identified herein as SEQ ID No. 2. *MD*
- claim 1*
11. A protein according to ~~any of claims 1 to 7~~, having all or part of the amino-acid sequence identified herein as SEQ ID No. 4. *MD*
- claim 1*
12. A protein according to ~~any of claims 1 to 5~~, having serine/threonine kinase activity and all or part of the amino-acid sequence identified herein as SEQ ID No. 6. *MD*
- claim 1*
13. A protein according to ~~any of claims 1 to 7~~, having all or part of the amino-acid sequence identified herein as SEQ ID No. 8. *MD*
- claim 1*
14. A protein according to ~~any of claims 1 to 5, 8 and 9~~, having all or part of the amino-acid sequence identified herein as SEQ ID No. 10. *MD*
- claim 1*
15. A protein according to ~~any of claims 1 to 5~~, having all or part of the amino-acid sequence identified herein as SEQ ID No. 12.
- claim 1*
16. A protein according to ~~any of claims 1 to 5~~, having all or part of the amino-acid sequence identified herein as SEQ ID No. 14.
- claim 1*
17. A protein according to ~~any of claims 1 to 7~~, having all or part of the amino-acid sequence identified herein as SEQ ID No. 16.
- claim 1*
18. A protein according to ~~any of claims 1 to 5~~, having all or part of the amino-acid sequence identified herein as SEQ ID No. 18.
- claim 1*
19. A protein according to ~~any preceding claim~~, that is a soluble receptor.
- claim 1*
20. An antibody which binds specifically to a protein as defined in ~~any of claims 1 to 19~~ and not to at least one other such protein.
- claim 1*
21. An isolated nucleic acid molecule which codes for, or is complementary to a nucleic acid molecule which codes for, a protein as defined in ~~any of claims 1 to 19~~.
- claim 1*
22. A recombinant nucleic acid molecule comprising at least two heterologous sequences, one of which codes for,

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or is complementary to a nucleic acid molecule which codes for, a protein as defined in ^{claim 1} ~~any of claims 1 to 19~~.

23. A molecule according to claim 21 ~~or claim 22~~, wherein the protein is a TGF- β -type I receptor.

5 24. A molecule according to claim 21 ~~or claim 22~~, wherein the protein is an activin receptor.

25. A DNA or RNA/mRNA molecule according to ^{claim 21} ~~any of claims 21 to 24~~.

26. A molecule according to ^{claim 20} ~~any of claims 20 to 24~~, which additionally comprises, operably associated with the coding sequence, a sequence adapted to allow expression of the protein.

27. A host comprising a molecule according to claim 26, which is capable of expressing the protein.

15 28. A host according to claim 27, which comprises PAE cells.

29. A host according to claim 27 ~~or claim 28~~, transfected with the Chim A receptor plasmid.

30. A product according to any preceding claim, for therapeutic or diagnostic use.

20 31. Use of a product according to any of claims 1 to 29, for the manufacture of a medicament for use in treating a condition associated with TGF activity.

add c1

add c2

add D1